

REMARKS/ARGUMENT

Claims 3-34, 39, 40, 43-45, 48-50, 53-57, 60-64, 67-70, 73-78, 81-84, 87-92 and 95-98 are pending. Claims 1, 2, 35-38, 41, 42, 46, 47, 51, 52, 58, 59, 65, 66, 71, 72, 79, 80, 85, 86, 93 and 94 have been cancelled without prejudice. Claims 3, 6, 9, 13, 17, 20, 24, 27, 31, 39, 40, 44, 45, 49, 50, 56, 57, 63, 64, 69, 70, 77, 78, 83, 84, 91 and 92 have been amended to define still more clearly what Applicants regard as their invention. The amendments are strictly formal in nature and are not believed to narrow the claims in any way. The title has been amended to make it more descriptive, as required in the Office Action.

Claims 3, 6, 9, 13, 17, 20, 24, 27, 31, 39, 44, 49, 56, 63, 69, 77, 83 and 91 are the independent claims.

The drawings were objected to as allegedly not showing each feature recited in the claims. Applicants traverse. With regard to the multiplexing and delay unit with a double-pass amplifier and single-pass amplifier, and multiple laser outputs with third, fourth and fifth harmonics, this unit is shown in at least Figs. 1 and 2. In particular, the accompanying description for those figures indicates that the circuit in Figure 1 includes a delay unit 5. The circuit of Figure 2 performs multiplexing of individual pulses by use of the time delay to produce delayed pulses and amplifies by optical amplifier 3 in a single pass manner and then in a double pass manner. See, e.g., the specification at page 35, lines 8-24. As to the outputting of the laser having third, fourth and fifth harmonics, since the laser itself is shown in the figures, the fact that the laser can output laser with third, fourth and fifth harmonics need not be shown graphically, as long as that feature is supported by the specification. Of course, all originally presented claims are supported by the original disclosure. The recited feature of remote control may be provided, for example, by computer 6, shown in the figures.

The claims reciting the multiple etalon plates, which are fully supported by the original disclosure, have been cancelled without prejudice, obviating the objection to the

drawings. For at least the reasons delineated above, the objections to the drawings are believed obviated.

Claims 1-98 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite. First, cancellation of Claims 1, 2, 35-38, 41, 42, 46, 47, 51, 52, 58, 59, 65, 66, 71, 72, 79, 80, 85, 86, 93 and 94 renders the rejections of those claims moot.

The claims have been carefully reviewed and amended as deemed necessary to ensure that they conform fully with the requirements of Section 112, second paragraph, with special attention to the points raised at page 3 of the Office Action. In particular, the amended method claims are believed even more clearly to define a method for repairing a pattern. The section 101 rejection is believed to have been improper since the claims rejected are clearly statutory. However, the above amendments obviate that rejection in any event. It is believed that the rejection under Section 112, second paragraph, has been obviated, and its withdrawal is therefore respectfully requested. With regard to the allegedly vague language in claims 9, 13, 20, 27, 31, 49, 56, 69, 83 and 91, Applicants submit that these claims clearly meet the requirements of Section 112.

In particular, as to the Section 112 rejection of claim 91, the objected-to features are supported by the specification at page 35, lines 4-29. Withdrawal of the rejection is requested.

Claims 1-4, 6, 7, 9, 10, 11, 13-15, 17, 18, 20-22, 24, 25, 27-29, 31-33, 35, 39, 44, 49, 56, 63, 69, 77, 83 and 91 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 5,790,574 (Rieger '574). Claims 5, 8, 12, 16, 19, 23, 26, 30 and 34 were rejected under 35 U.S.C. § 103 as obvious from Rieger '574 in view of U.S. Patent 6,404,787 (Unternahrer et al.). Claims 36, 40, 45, 50, 57, 64, 70, 78, 84 and 92 were rejected under 35 U.S.C. § 103 as obvious from Rieger '574 in view of JP 2-32323. Claims 37, 38, 41, 42, 46, 47, 51, 52, 58, 59, 65, 66, 71, 72, 79, 80, 85, 86, 93 and 94 were rejected under 35 U.S.C. §

103 as obvious from Rieger '574 in view of JP 2-32323 and further in view of JP 8-160600 and U.S. Patent 5,710,787 (Amada et al.) Claims 43, 48, 53, 60, 67, 73, 81, 87 and 95 were rejected under 35 U.S.C. § 103 as obvious from Rieger '574 in view of Unternahrer et al. and further in view of Amada et al. Claims 54, 55, 61, 62, 74, 75, 88, 89, 96 and 97 were rejected under 35 U.S.C. § 103 as obvious from Rieger '574 in view of Amada et al. Claims 68, 76, 82, 90 and 98 were rejected under 35 U.S.C. § 103 as obvious from Rieger '574 in view of U.S. Patent 5,742,634 (Rieger '634). The cancellation of claims 1, 2, 35-38, 41, 42, 46, 47, 51, 52, 58, 59, 65, 66, 71, 72, 79, 80, 85, 86, 93 and 94 renders their rejections moot. Applicants submit that the independent claims are patentable over the cited art for at least the following reasons.

Claim 3 is directed to a method for repairing a pattern using a laser comprising: identifying a defect in the pattern; slicing a single laser pulse or multi-laser pulses from a string of pulses making up laser light emitted from a Q-switched mode-locked pulse laser by using an optical modulator; and applying the laser light having the sliced single pulse or the sliced multi-laser pulses as laser light to the defect to remove the defect for repair processing.

A salient feature of claim 3 is slicing a single laser pulse or multi-laser pulses from a string of pulses making up laser light emitted from a Q-switched mode-locked pulse by using an optical modulator. In the Office Action, the position was taken that the slicing step was met by the optical modulator 80 of Rieger '574. This is incorrect.

First, to anticipate, a reference must show every feature, and those features must be shown *in the same relationship to one another as is claimed*, since each claim must be examined as a whole. Figure 6 of Rieger '574 shows a Q-switch mode locked laser. However, element 80, which is a beam splitter, *is shown in Figure 8* of Rieger '574, which shows a multiplexing arrangement for use in lasers that *do not* produce a mode locked pulse train, i.e., for lasers *other than a Q-switch mode locked laser*. See col. 7, lines 45-51. Thus, even if element 80 functioned as stated in the rejection (which it does not, as will be discussed below), the salient

feature of claim 3 discussed above would not be met because element 80 in Rieger ‘574 is used for lasers other than the type recited in claim 3. For at least this reason alone, the rejection is obviated.

Second, the Office Action applied beam splitter 80, which it referred to as a “optical modulator,” to the recited feature of slicing one or more laser pulses from a pulse train. However, this is *the opposite* of what element 80 does. Figure 8, which shows beam splitter 80, shows a configuration used for lasers that only produce a single pulse, as opposed to a mode locked pulse train. To generate such a pulse train, the pulse from the laser can be multiplexed into a pulse train. This is done by splitting a single linearly polarized pulse from the seed laser into two beams using the splitter 80. Thus, far from slicing off a pulse or pulses from a pulse train, as in claim 3, element 80 *creates a pulse train from a single pulse*. For at least this additional reason, no *prima facie* case of anticipation has been set forth.

To summarize: (1) the element 80 appears in an embodiment of Rieger ‘574 that *does not use* the recited Q-switched mode locked laser; and (2) element 80 does not slice off one or more pulses from a pulse train at all. In view of the foregoing, claim 3 is believed clearly patentable over the prior art.

The other independent claims each recite a similar feature and are believed patentable for substantially similar reasons.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

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Respectfully submitted,

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